

TROPICAL CYCLONE 02B

Tropical Cyclone 02B, the first tropical cyclone to develop in the North Indian Ocean during the Fall transition season, led a rather uneventful life. Tropical Cyclone 02B was first detected early on the 10th of October as a broad area of convection in the north-central Bay of Bengal. During the day the convection showed improved organization with cirrus plumes indicating an upper-level anticyclone existed over the disturbance. No surface synoptic data was available in the area; however, curvature of the low-level clouds indicated a developing low-level circulation was present. Dvorak intensity analysis of the 101800Z imagery estimated that surface winds of 30 kt (15 m/s) were present in the system. This prompted the issuance of the first of two TCFAs at 102300Z.

During the next two days the disturbance developed a broad circulation covering the head of the Bay of Bengal and intensified slowly. Upper-level support remained favorable for further intensification and the only inhibiting factor for development was the proximity of the disturbance to land which restricted the low-level inflow. Although Tropical Cyclone 02B formed in the monsoon trough, most of the flow from the southwest monsoon was being drawn into Tropical Storm Susan (22W) which was developing in the South China Sea. If Susan

had not been present, Tropical Cyclone 02B may have developed into a more potent system.

The developing cyclone tracked slowly north until 0600Z on the 12th when a turn to the northwest began. At 121800Z the first warning was issued. The initial warning on Tropical Cyclone 02B was prompted by satellite imagery which indicated that the system had intensified significantly over the past 24 hours and was now supporting winds of 45 kt (23 m/s). Once again due to lack of synoptic data, the intensity estimate was based solely on Dvorak analysis of satellite imagery. Tropical Cyclone 02B maintained this intensity for the next 12 hours until strong upper-level easterlies began to shear the convection to the west on 13 October (Figure 3-32-1). This started a weakening trend which continued until dissipation.

As it weakened, Tropical Cyclone 02B continued moving to the northwest and increased its forward speed. At about 140300Z Tropical Cyclone 02B made landfall on the coast of India approximately 10nm (19 km) south of Balasore (WMO 42895). The system weakened rapidly over land with the final warning being issued at 141200Z. Although some heavy rains accompanied this storm as it made landfall there have been no reports of damage.

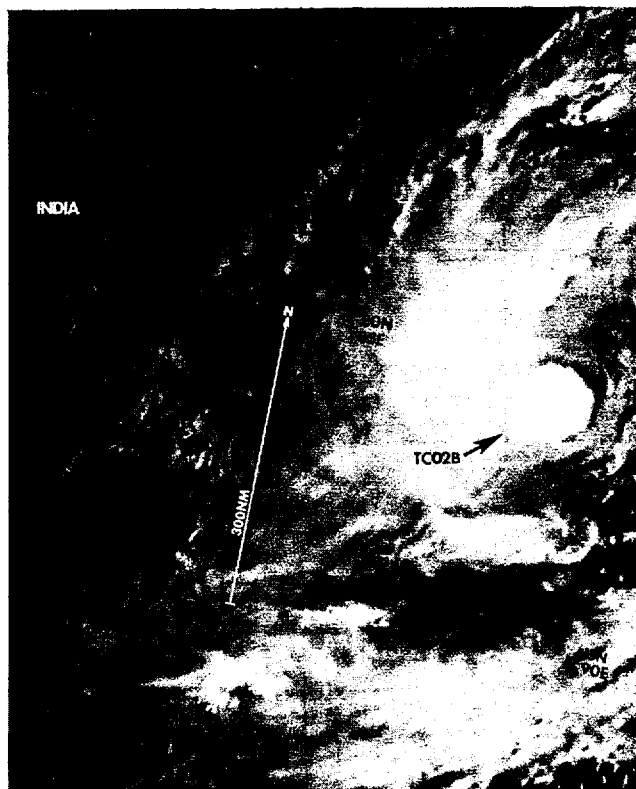


Figure 3-32-1. Tropical Cyclone 02B near maximum intensity (130446Z October DMSP visual imagery).